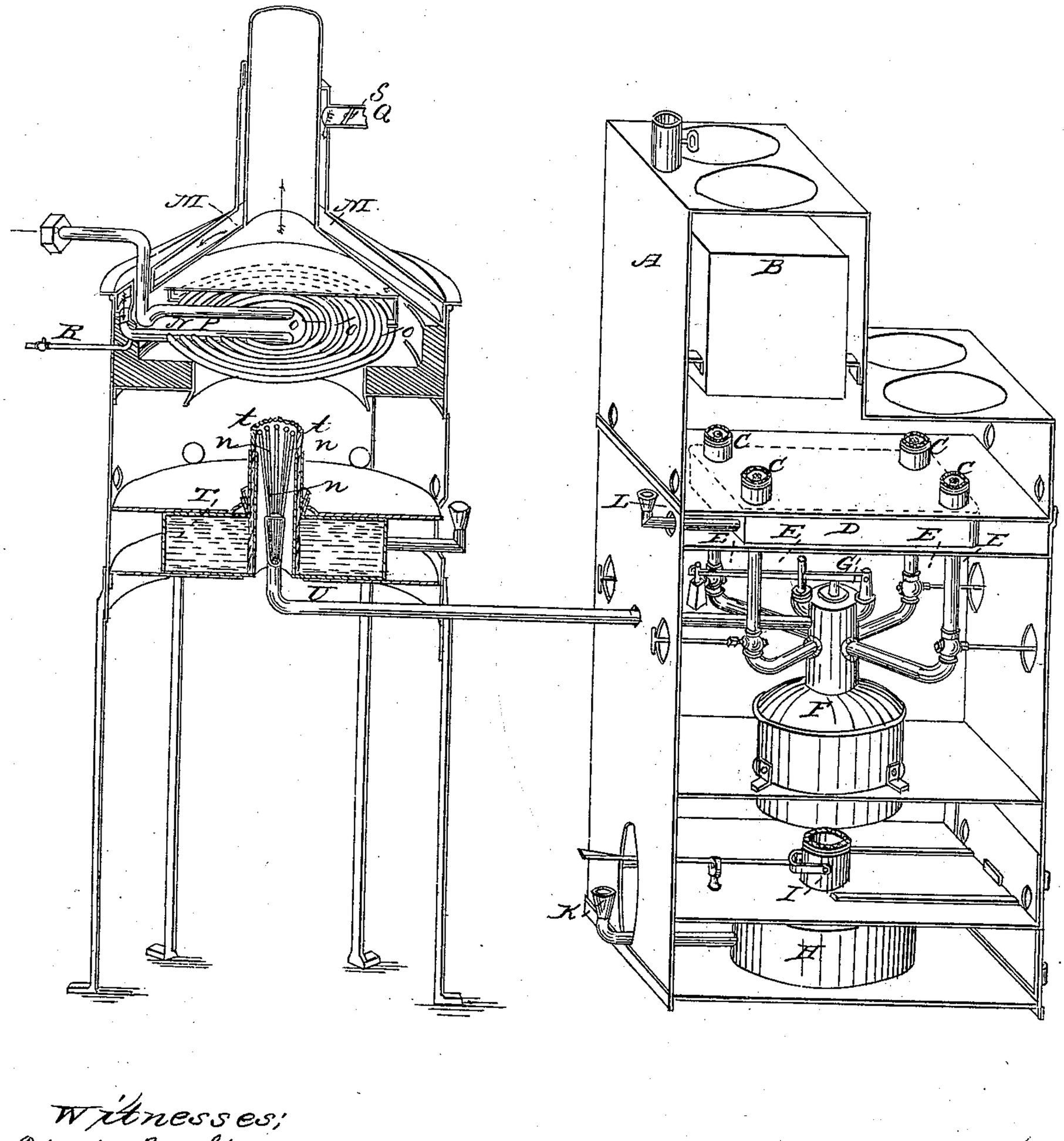
E. CONWAY.

Heating and Cooking Apparatus.

No. 29,769. Patented Aug. 28, 1860.



Witnesses;
Octavius Knight
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UNITED STATES PATENT OFFICE.

EDWARD CONWAY, OF DAYTON, OHIO.

HEATING AND COOKING APPARATUS.

Specification of Letters Patent No. 29,769, dated August 28, 1860.

To all whom it may concern:

Be it known that I, EDWARD CONWAY, of Dayton, Montgomery county, Ohio, have invented certain new and useful Improvements in Cooking and Heating Apparatus; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention consists in a peculiar construction and arrangement of alcoholic lamps and generators for cooking and heating purposes.

The accompanying drawing represents a sectional perspective view of a combined cooking stove and water heater embodying my improvement.

The cooking stove A is heated by means of burners C of an alcoholic lamp D and is provided with an isolated oven B admitting of a free passage of heated vapor completely around it. Each burner is provided with a jet pipe E through which alcoholic vapor of considerable heat and pressure is projected and ignited in passing the burning lampwick, said vapor jets serving to enable the burners to give out a great volume of flame and intensity of heat. Each of the pipes E is provided with a regulating valve or cock *e* and communicates with the boiler F in which the alcoholic vapor is generated. One or all of the burners C can be used at a time, those not in use having the cocks *e* closed and caps over their wicks to prevent evaporation.

Common whisky or a mixture of alcohol and water is used in the boiler F to generate the jet vapor. The boiler is provided with a suitable safety valve G and its contained fluid is heated for the generation of the vapor, by means of a common spirit lamp H. A sliding sleeve or tube I is fitted to this lamp, by the vertical adjustment of which the size of the flame and the heat from the burner may be regulated at pleasure. Tubes K and L admit of lamps H and D being readily filled. The water heating apparatus is composed of jacket or heater crown M, and pipes N, O, P. The water is admitted at pipe Q and passes through the jacket M, and into and through pipes N, O, to discharge pipe P. The peculiar form and arrangement of the pipes give ample allowance for their expansion and contraction under different degrees of heat, and the relative length of the curved pipes to each other being inversely proportioned to the intensity of the heat imparted to them by the lamp, a proper distribution of the flow of water through the coil is maintained at all times.

When the apparatus is not in use the pipes, &c., may be emptied at pipe R, where also hot water may be drawn off when the apparatus is in operation.

The flow of water through the heater may be regulated by valve S.

The pipes and jacket are under the direct-heating operation of combined wick and vapor jet spirit lamp T.

The vapor jet of the lamp is carried through a number of small tubes *u* discharging on a level with top of wick *t*, tubes *u* being branches from main tube U the whole having communication with the boiler F. The distribution of the jet through numerous tubes allows of the vapor being discharged near the wick frame and serves effectually to spread the flame and to enlarge the atmospheric contact.

I claim as new and of my invention herein—

1. The arrangement of valved compound burners C, E, *e*, in the described combination with a cooking stove (A) for the purposes set forth.

2. The compound burner composed of a wick *t* and circular series of jets *u*, communicating with the alcohol boiler as set forth.

In testimony of which invention, I hereunto set my hand.

EDWARD CONWAY.

Witnesses:

B. A. HAMILTON,

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